

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference AMS . P52304WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 03/04499	International filing date (day/month/year) 13/10/2003	(Earliest) Priority Date (day/month/year) 11/10/2002
Applicant WESTERNGECO SEISMIC HOLDINGS LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☒ because this figure better characterizes the invention.

1b
☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

P B 03/04499

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The present invention provides a method and apparatus for determining the position of a seismic cable being used to perform a marine seismic survey. The apparatus includes at least one seismic sensor (115) and a plurality of sources (125) deployed in a manner that is structurally independent of the seismic sensors (115) and adapted to provide a positioning signal (130) distinguishable from a seismic survey signal (118) to the seismic sensors (115).

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/04499

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G01V1/38

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G01V

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 84 03153 A (KONGSBERG VAPENFAB AS) 16 August 1984 (1984-08-16) page 2, paragraph 5 page 3, paragraphs 3,4 page 6, paragraph 4 page 7, paragraphs 2,4 page 8, paragraphs 1-3 page 9, paragraph 5 figures 1,2	1-30, 35-38
Y	---	31-34, 39-42
X	GB 2 089 043 A (CHEVRON RES) 16 June 1982 (1982-06-16) page 1, line 73 - line 98 page 2, line 11 - line 62 claim 1; figure 1 ---	1-30
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

28 January 2004

Date of mailing of the international search report

13/02/2004

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/ 03/04499

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	COURT I.N.: "Applications of accoustics to source-array and streamer tow-point positioning" GEOPHYSICS, SOCIETY OF EXPLORATION GEOPHYSICISTS, vol. 56, no. 4, 1 April 1991 (1991-04-01), pages 558-564, XP002268338 page 559, right-hand column; figure 1 page 561	31-34, 39-42
X	US 4 187 492 A (DEIGNIERES ROBERT) 5 February 1980 (1980-02-05) column 2, line 19 column 2, line 50 - line 59 column 3, line 24 - line 28 claim 1; figure 1	1,19
X	US 4 376 301 A (ROBERTS F ALEX) 8 March 1983 (1983-03-08) column 2, line 59 -column 3, line 30 figure 1	1,19
A	US 4 641 287 A (NEELEY WALTER P) 3 February 1987 (1987-02-03) column 1, line 59 -column 2, line 62 column 3, line 20 - line 25 figure 1	39-42
A	FR 2 620 536 A (GEOPHYSIQUE CIE GLE) 17 March 1989 (1989-03-17) page 5, line 29 -page 7, line 3 page 7, line 23 - line 29 figures 1A,1B	1-42
A	US 4 669 067 A (ROBERTS F ALEX) 26 May 1987 (1987-05-26) column 2, line 65 -column 3, line 36 column 4, line 15 -column 5, line 23	1-42

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/83 03/04499

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 8403153	A	16-08-1984	NO 830358 A AU 2438584 A BR 8405066 A EP 0134804 A1 JP 60500383 T WO 8403153 A1	03-08-1984 30-08-1984 26-12-1984 27-03-1985 22-03-1985 16-08-1984
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INTERNATIONAL SEARCH REPORT

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International Application No

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4641287	A	AU 4086585 A CA 1240782 A1	07-11-1985 16-08-1988
FR 2620536	A	FR 2620536 A1	17-03-1989
US 4669067	A	NONE	